

ECOMID® B GF50 BK 2000/1A - PA6

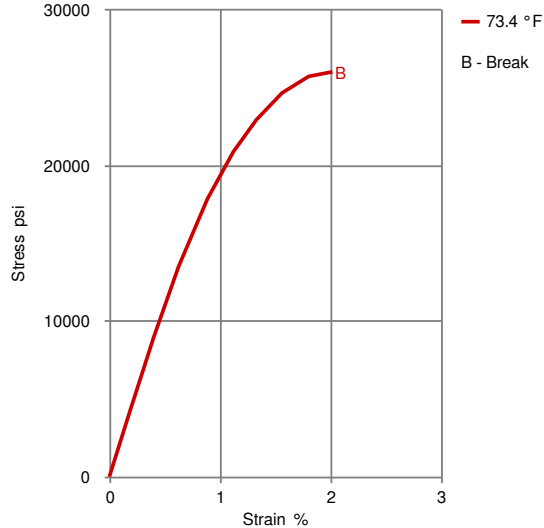
Description

(OMNILON® PA6 U GR50 BK2000)
 50% Glass Reinforced, Utility Grade, PA6

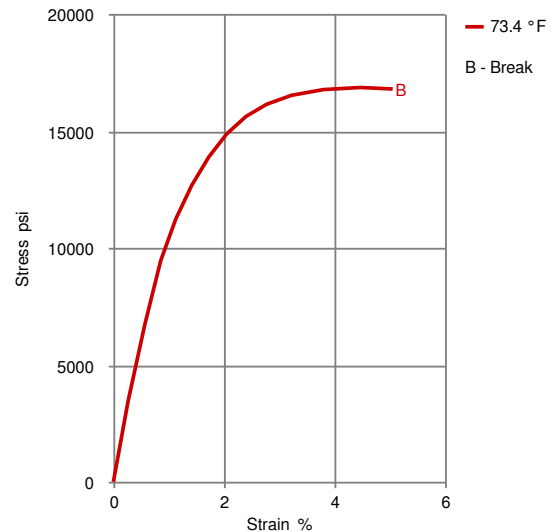
Physical properties	Value	Unit	Test Standard
Density	97.4	lb/ft ³	ISO 1183
Mechanical properties	Value	Unit	Test Standard
Tensile modulus	2.36E6/1.45E6	psi	ISO 527-1, -2
Tensile stress at break, 5mm/min	26800/16700	psi	ISO 527-1, -2
Tensile strain at break, 5mm/min	1.8/5.5	%	ISO 527-1, -2
Flexural modulus, 23°C	2.25E6/1.38E6	psi	ISO 178
Flexural strength, 23°C	42100/26100	psi	ISO 178
Charpy notched impact strength, 23°C	5.71/8.32	ft-lb/in ²	ISO 179/1eA
Thermal properties	Value	Unit	Test Standard
DTUL at 1.8 MPa	415	°F	ISO 75-1, -2
DTUL at 0.45 MPa	424	°F	ISO 75-1, -2

Diagrams

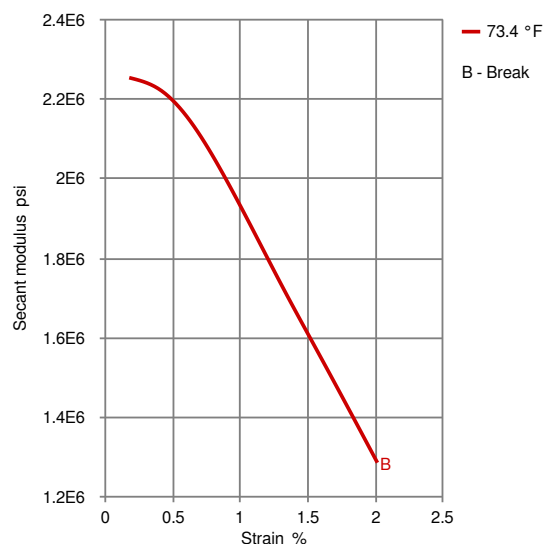
Stress-strain (dry)



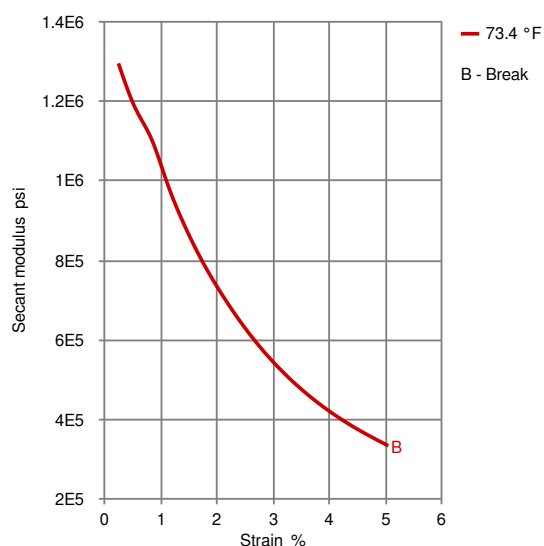
Stress-strain (cond.)



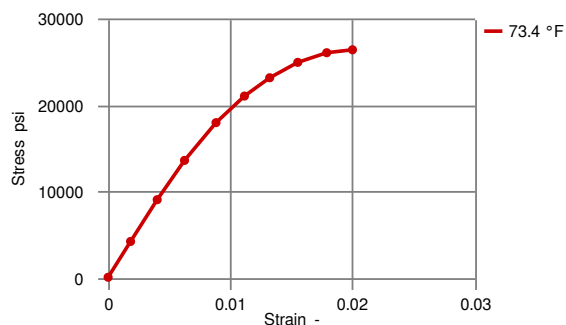
Secant modulus-strain (dry)



Secant modulus-strain (cond.)

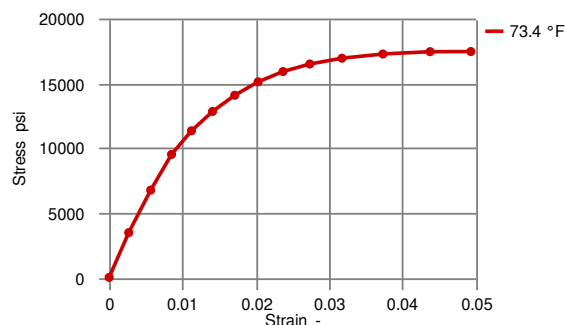


True Stress-strain (dry)



Dry sample dry as molded
 · no yield at 23 °C
 Conditioned sample conditioned according to ISO 1110
 · 23 °C yield at 0.04382 strain, 120.245 stress
 Poisson ratio used is 0.39

True Stress-strain (cond.)



Dry sample dry as molded
 · no yield at 23 °C
 Conditioned sample conditioned according to ISO 1110
 · 23 °C yield at 0.04382 strain, 120.245 stress
 Poisson ratio used is 0.39

Typical injection molding processing conditions

Pre Drying

	Value	Unit
Necessary low maximum residual moisture content	0.15	%
Drying time	4 - 8	h
Drying temperature	176 - 194	°F

Temperature

	Value	Unit
Zone1 temperature	428 - 446	°F
Zone2 temperature	437 - 455	°F
Zone3 temperature	455 - 473	°F
Zone4 temperature	473 - 491	°F

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Nozzle temperature	491 - 518	°F
Melt temperature	482 - 518	°F
Mold temperature	140 - 176	°F
Hot runner temperature	491 - 518	°F

Characteristics

Special Characteristics	Recycled content
Product Categories	Glass reinforced
Processing	Injection molding

Other Approvals

OEM	Specification	Additional Information
VW Group*	VW50125	* best fitting grade to PA6-10, not officially approved

General Disclaimer

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data values. Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products. The products mentioned herein are not intended for use in medical or dental implants.

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